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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,961	11/21/2003	Franz Heilmeier	080437.52869US	8021
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CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER BRYANT, DAVID P	
			ART UNIT 3726	PAPER NUMBER

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,961

Applicant(s)

HEILMEIER ET AL.

Examiner

David P. Bryant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 14, 2005, has been entered.

Election/Restrictions

Claim 31, drawn to an invention nonelected with traverse in the paper filed September 13, 2004, remains withdrawn from further consideration. It is suggested that the claim be canceled in response to this Office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tarbox (U.S. Patent No. Re. 18,750).

Tarbox teaches the claimed invention, as outlined below:

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Claim 1: A method for producing a load bearing structural component for a motor vehicle (i.e. a vehicle chassis, as disclosed on page 1, lines 1-10), including at least two shell sections **27, 30** (see Figures 1 and 12; page 2, lines 18-27) that are attached to one another along flanges **32, 33** (Figure 12) comprising attaching the shell sections of the structural component to one another by flanging (see page 2, lines 27-39).

Claim 12: The chassis of Tarbox is “an elongated support component” (see Figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tarbox (U.S. Patent No. Re. 18,750).

On page 2, lines 6-17, Tarbox discloses that the shell sections are formed “of relatively thin, light, sheet metal” but fails to disclose whether the metal is an “alloy” as claimed. However, the examiner takes Official Notice that metal alloys (particularly aluminum alloys) are conventionally used in the motor vehicle arts to provide required strength in combination with reduced weight, and to use such an alloy would have been obvious to one of ordinary skill in the art for those reasons.

Claims 2, 3, 6-10, 13, 16, 17, 19-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarbox (U.S. Patent No. Re. 18,750) in view of Krajewski et al. (U.S. Patent No. 5,948,185).

Claims 2 and 3: Tarbox teaches the method for flanging the shell sections to form the vehicle chassis, but fails to teach the application of adhesive to at least one of the flanges prior to the flanging process.

Krajewski et al. teach a method of assembling vehicle shell sections **10, 28** that are joined to each other along flanges **12** in a flanging process (see Figures 3 and 4; column 3, line 57 through column 4, line 16). In column 3, lines 49-52, it is disclosed that a “suitable” adhesive is applied to the flanged surface of at least one of the shell sections prior to flanging.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply adhesive to at least one of the flanges of the shell sections of Tarbox prior to flanging, as taught by Krajewski et al., to provide a supplementary bond to the flanged chassis.

It is noted that there is no explicit disclosure in Krajewski et al. as to whether the adhesive is “very strong and highly rigid after hardening” or is “a single-component epoxy adhesive” as claimed. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used such an adhesive between the flanged shell sections to ensure a rigid, inseparable bond between the two shell sections. (It is noted that it has been held that the selection of a known material on the basis of its suitability for the intended use is a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.)

Claims 6, 7, 13, 19-21, and 23: Tarbox teaches formation of the shell sections in a stamping process (page 2, lines 18-27), followed by adhesive application as taught by Krajewski et al., and

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finally flanging of the shell sections. However, Tarbox fails to disclose exactly how/when the stamping is performed with respect to the adhesive application and flanging.

Krajewski et al. teach (in columns 3-4) that the inner and outer shell sections are stamped to their respective shapes in a series of mechanical dies, adhesive is then applied to at least one of the shell sections, and the shell sections are then flanged together using flanging dies 30, 32. From this disclosure, it is clear that there is a pressing line to form the shell sections, a station at which adhesive is applied to the shell sections, and a flanging station for performing the flanging step.

In view of this teaching in Krajewski et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a pressing line to form the shell sections of Tarbox to progressively form the sheet metal to its desired shape (followed by the remaining steps of applying adhesive and flanging).

However, it is unclear whether the stations of Krajewski et al. are arranged in a continuous, assembly line fashion (as recited in claims 6, 13, 19, and 20) or whether the adhesive is applied automatically at its respective station (as recited in claims 7 and 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have aligned the stations in assembly line fashion, and to automatically apply adhesive to the shell sections at the adhesive applying station, as the examiner takes Official notice that automobiles and automobile subassemblies are conventionally assembled in assembly lines to enable continuous, efficient assembly of parts.

Claims 8-10: Tarbox fails to teach heating at least one of the shell sections prior to flanging.

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Krajewski et al. teach heating of the vehicle shell sections prior to flanging, using a heating device **24** positioned outside of the flanging tool. See Figure 2 and column 4, lines 17-57. Note particularly lines 29-32, wherein it is disclosed that heating is restricted to the linear area that undergoes the greatest deformation during flanging.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have heated the flanges of the shell sections of Tarbox prior to flanging, as taught by Krajewski et al., to soften the flanges and therefore facilitate the flanging operation.

Claims 16 and 17: As noted above with respect to claim 5, the use of alloys in motor vehicles is well known and would have been obvious to one of ordinary skill in the art. (Note also that Krajewski et al. teach the use of aluminum alloy sheet metal, as disclosed in column 3, lines 8-10.)

Claims 4, 14, 15, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarbox (U.S. Patent No. Re. 18,750) in view of Develay et al. (U.S. Patent No. 4,000,007).

Claims 4, 14, and 15: Tarbox discloses the inner and outer shell sections of the vehicle chassis to be formed by “stamping” rather than “deep drawn” as claimed.

Develay et al. disclose that inner and outer automobile shell sections can be formed by stamping, pressing, or deep drawing prior to flanging the shell sections together. See column 1, lines 12-19; and column 3, lines 26-32.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the inner and outer shell sections of the chassis of Tarbox by deep drawing rather than stamping, since the two have been shown to be functionally equivalent

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processes for forming automobile shell sections and in view of the inherent suggestion in Develay et al. that the selection between either process is merely a matter of design choice.

Claim 18: As noted above with respect to claim 5, the use of alloys in motor vehicles is well known and would have been obvious to one of ordinary skill in the art.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tarbox (U.S. Patent No. Re. 18,750) in view of Develay et al. (U.S. Patent No. 4,000,007), as applied to claim 4 above, and further in view of Krajewski et al. (U.S. Patent No. 5,948,185).

Tarbox/Develay et al. teach the formation of the shell sections in a stamping or deep drawing process, followed by flanging of the shell sections. However, Tarbox/Develay et al. fail to teach exactly how/when the stamping is performed with respect to the flanging.

Krajewski et al. teach (in columns 3-4) that the inner and outer shell sections are stamped to their respective shapes in a series of mechanical dies, and the shell sections are then flanged together using flanging dies 30, 32. From this disclosure, it is clear that there is a pressing line to form the shell sections, and a flanging station for performing the flanging step.

In view of this teaching in Krajewski et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a pressing line to form the shell sections of Tarbox/Develay et al. to progressively form the sheet metal to its desired shape (followed by the flanging of the shell sections).

However, it is unclear whether the stations of Krajewski et al. are arranged in a continuous, assembly line fashion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have aligned the stations in assembly line fashion, as the

examiner takes Official notice that automobiles and automobile subassemblies are conventionally assembled in assembly lines to enable continuous, efficient assembly of parts.

Claims 11 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarbox (U.S. Patent No. Re. 18,750) in view of Krajewski et al. (U.S. Patent No. 5,948,185), as applied to claims 8 and 9 above, and further in view of St. Denis (U.S. Patent No. 5,587,042).

Although the combination of Tarbox/Krajewski et al. teaches heating the shell sections prior to flanging, there is no teaching of a heat-generating device positioned in a recess of a flanging die for heating the shell sections prior to and/or during flanging.

St. Denis teaches a flanging die **44** having a heat-generating device **52** disposed in a recess **53** therein to apply heat to the flange **16** of an inner shell section **14** during flanging. See Figures 2 and 6B; and column 4, lines 19-33.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a heat-generating device within the flanging tool of Tarbox/Krajewski et al., as taught by St. Denis, to provide a single integrated flanging tool for simultaneous heating and flanging.

It is further noted that since it has been shown that heating devices positioned outside or inside the flanging tool are functional equivalents in the art of heating and flanging vehicle shell sections, the selection of either type is well within the level of ordinary skill in the art and would thus constitute an obvious matter of design choice. The various combinations of inside/outside heating devices and heating prior to/during/both prior to and during flanging, are met by the

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various combinations of Tarbox/Krajewski et al./St. Denis, even if not explicitly outlined in detail herein.

Response to Arguments

Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Davies et al. teach a method for producing a load bearing structural component wherein the shell sections **28, 30** thereof are joined by flanging. See Figures 1-4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Bryant whose telephone number is 571-272-4526. The examiner can normally be reached on Monday-Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Jimenez can be reached on 571-272-4530. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David P. Bryant
Primary Examiner
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